

SynthsGW

COP 4331 Presentation - Group 6

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What SynthsGW is

Our software is for the amateur musician interested in creating custom synths and beats in an interface which allows them to upload their own songs, edit their songs, and incorporate the synths and beats to go along with their song. This is for musicians who have some experience with gathering their music, but our software allows users to categorize moments of music, too.

Our Mission

- SynthsGW strips down all of the mechanics of popular music making software and gives the user to add beats, create synths, and use existing mp3 sounds
- Users can use the built in Synth to create a new basic track of their own and work on it
- SynthsGW isn't trying to recreate anything, it's giving the user the ability to create custom songs with just a few tools

User Stories - As a user I want to be able to...

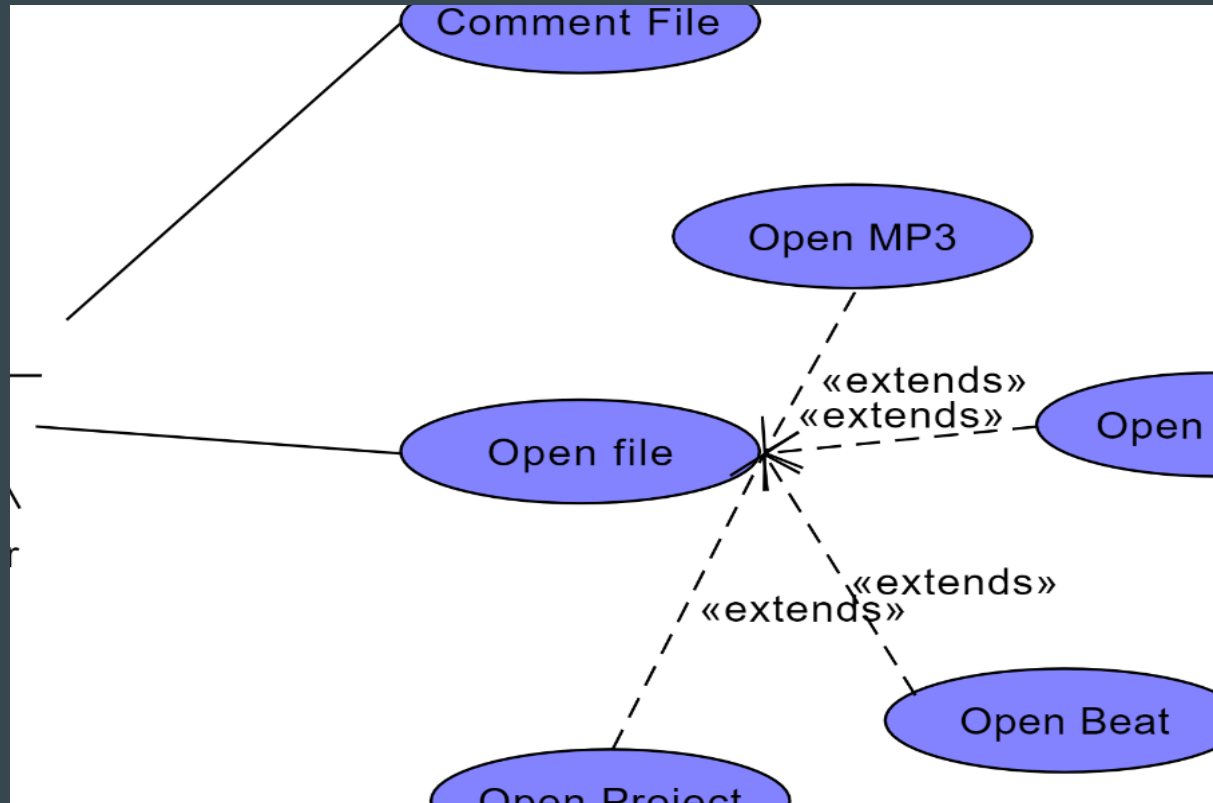
- Create custom beats to make my own sounds for music
- Edit a beat so that i can make changes if I want
- Play beats back so that i can hear what I've made
- Edit a synth once it is done so that I can make changes if I want
- Get help with the software by going to the GitHub page
- See the different synths, beats, mp3s that are playing so I can control my sounds
- Record my synth so I can produce music

Requirements - The software shall be able to...

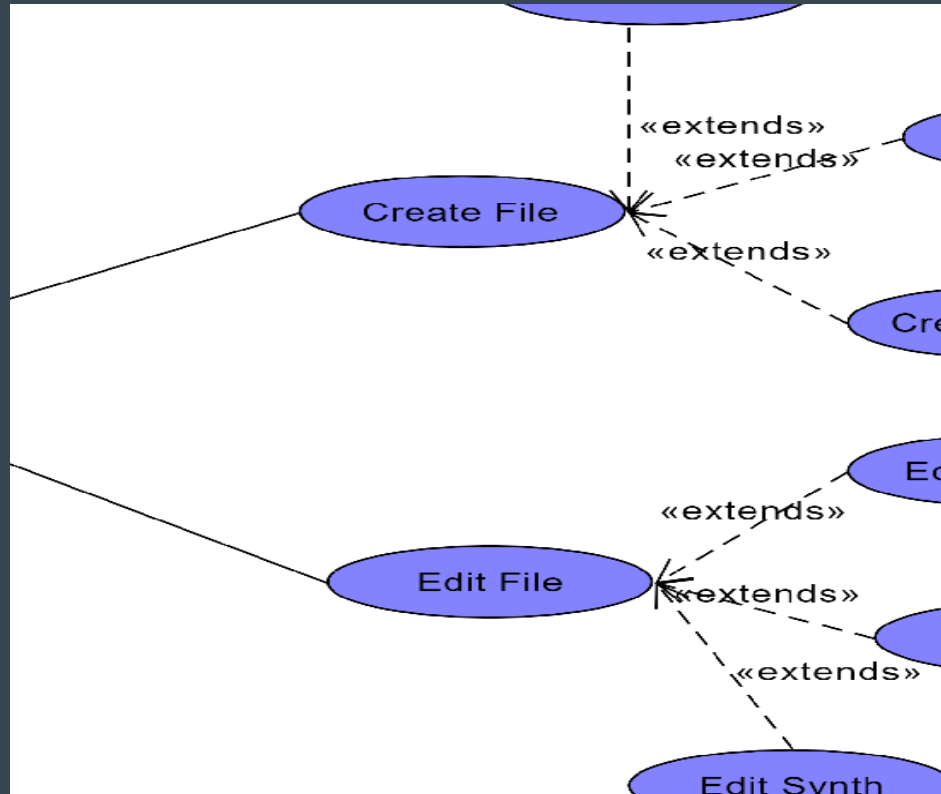
- Store beats in a directory of the user's choice
- Name a beat file
- Edit a beat
- Play beats back
- Store synths in a directory of the user's choice
- Name a synth file
- Close an open file
- Show the different files playing

System Design

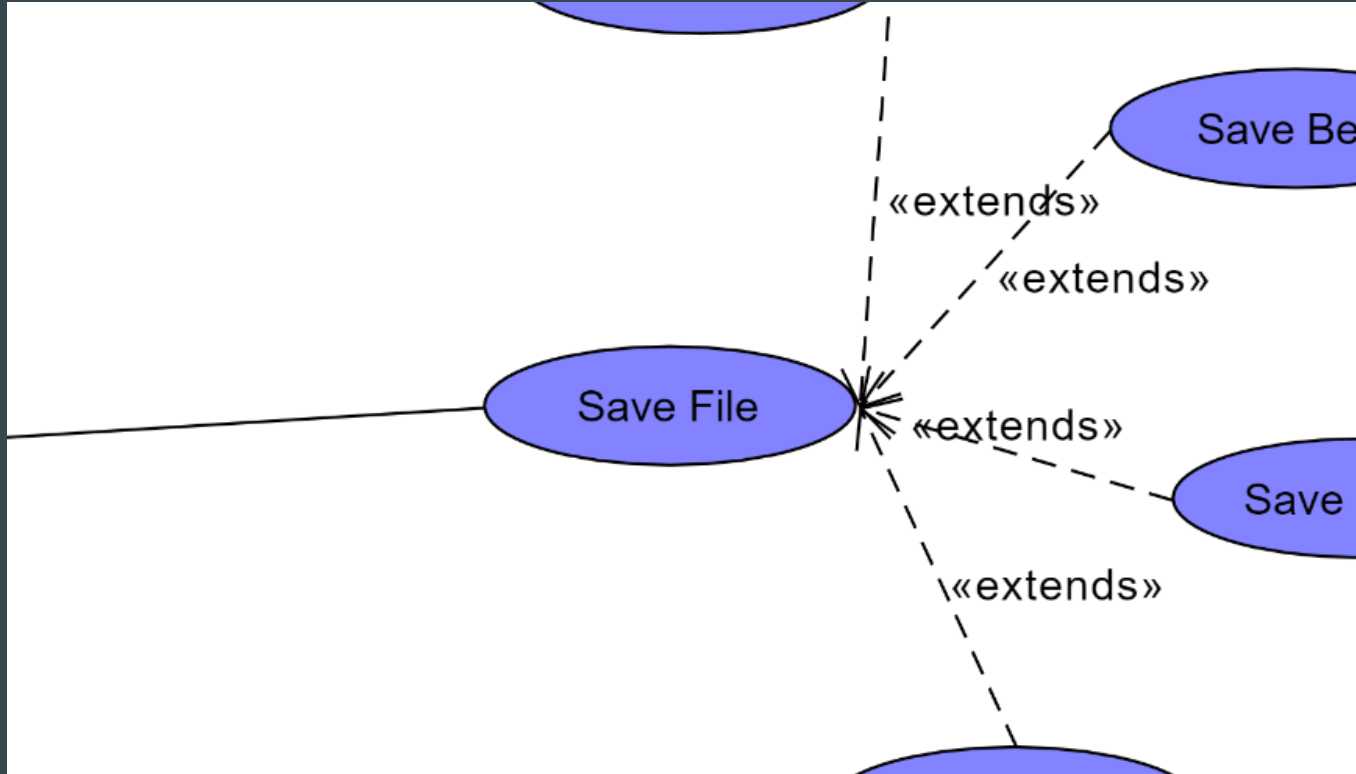
Use Case Diagram 1



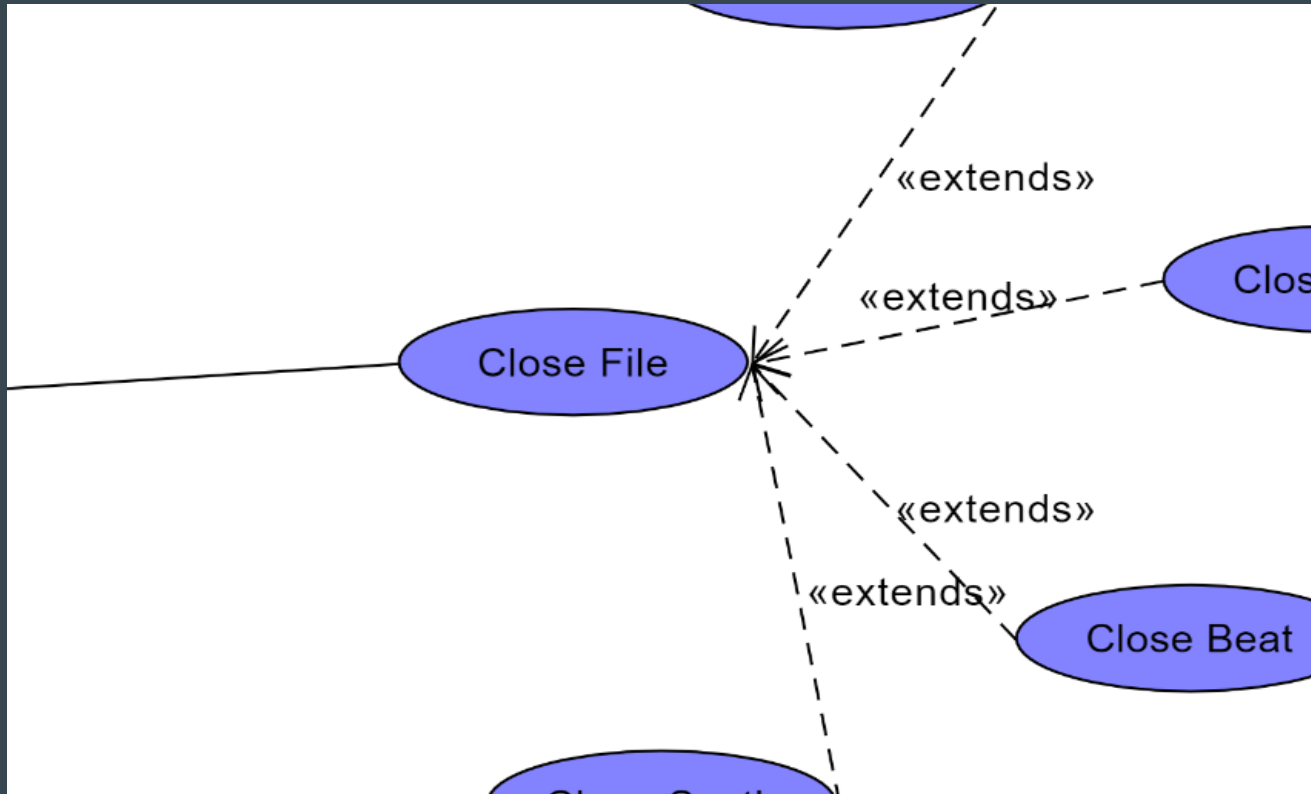
Use Case Diagram 2



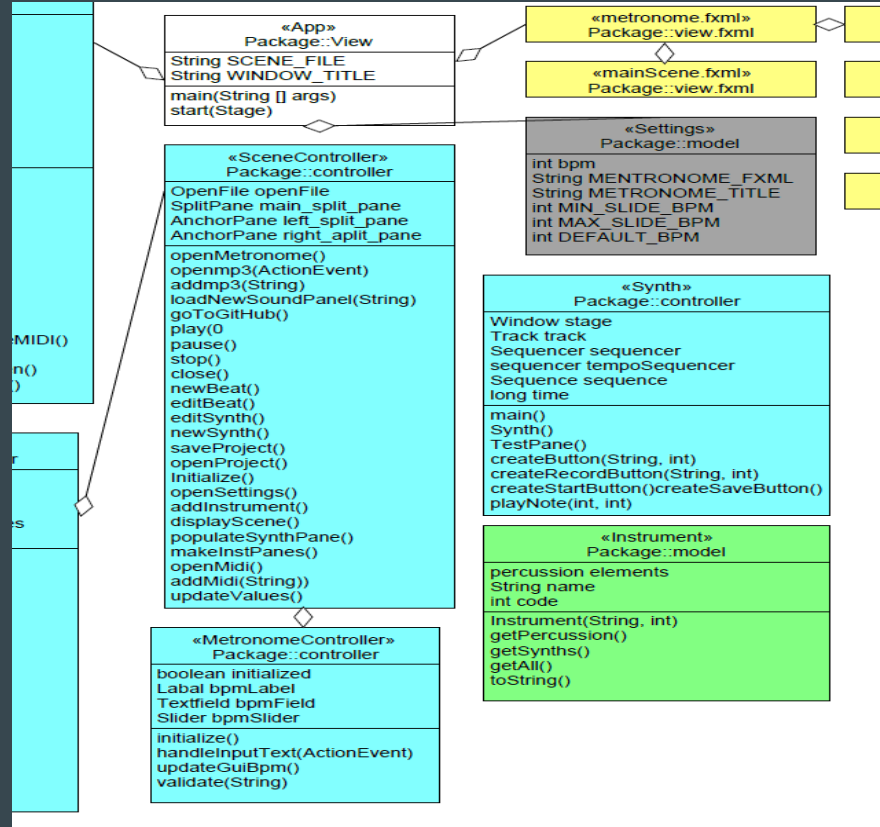
Use Case Diagram 3



Use Case Diagram 4



Class Diagram



Technology

- The functionality and some of the GUI elements were made using Java 8
- The main GUI Window along with the pop up windows were made using JavaFX and Java's SceneBuilder
- The Eclipse, Netbeans, and command line were used to do the programming
- The program can run on Windows 10, Mac OS _____, and the Linux distro _____

Primary Algorithms

- All of our code is fairly straightforward logically
- Relies on action events to call methods after the main window loads
- No common algorithms used

Testing

- Mix of manual and automated testing
- Unit testing of various methods automated where possible
- Testing of beatmaker and synthesizer done manually
- Manual testing done in place of automated testing because of the steep learning curve for automating testing of GUI components

What next?

- The main things that we would like to update and improve on are
 - Performance for the music makers
 - Range of the different sounds the music makers can produce
 - Performance of the program so all users can enjoy

Demo

Questions
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